

LANDSCAPING FOR WILDLIFE

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Ministry of
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Resources



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Printed in Ontario, Canada

Current publications of the Ontario Ministry of Natural Resources, and price lists, are obtainable through the Natural Resources Information Centre (personal shopping and mail orders).

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Cover: American robin nesting in an eastern white pine. Photograph by James M. Richards.



Landscaping for Wildlife

What is Landscaping for Wildlife?

As cities grow, the green spaces that provide pleasure to us and homes to native plants and animals continue to shrink.

Many people see their gardens as a way to reclaim some of the natural habitat we have lost. But some gardens are more natural than others. We can get the best results if, instead of perfect lawns and gardens filled with imported plant species, we create a green space that provides a home to local insects, birds and small mammals.

Landscaping for wildlife involves reproducing the groundcover, flowers, shrubs and trees that local wildlife need to thrive. The right combination of plants and trees can provide the food and shelter that will entice birds and animals to make their home and raise their young in your property, or at least keep them coming back for regular visits.

Preserving our natural habitat does more than make a contribution to sustaining local wildlife. As a homeowner, you will find that your garden can be less expensive to set up, and will need less care. And it will be friendlier to the whole ecosystem.

How Much Can One Person Do?

Turning your property into a haven for local wildlife won't replace large natural areas. You can't create Algonquin Provincial Park in your backyard.

Some species need much more space than you can provide, especially hawks, owls and foxes. But you can provide a haven for many species of wildlife, and help the environment at the same time.

You may not have a yard of your own if you live in a condominium or an apartment. In that case, try to get the management to landscape the property for wildlife.

What you attract to your yard will depend a lot on how close you live to a larger green space. If you live on or near a ravine, woodlot, field or park, you can expect to draw a wide range of wildlife to your property.

Even in a city or suburban lot you should see butterflies, cardinals and bluejays, spring and fall migrating warblers and sparrows, raccoons, squirrels and perhaps even rabbits.

While this booklet is too brief to provide you with every detail on landscaping for wildlife, it does tell you the principles you need to follow and gives you some suggestions about what to plant. There is also a list of resources at the



end of the booklet that will give you a head start in looking for more information and for native plants.

Principles of Landscaping for Wildlife

Here are the basic things that gardeners should keep in mind when trying to turn their property into a wildlife preserve.

Food, water, shelter. Birds and small animals need food, water and shelter throughout the year. The trees, shrubs and flowers you plant will determine whether or not they get it. You can supply water with a pool or fishpond, a well-placed birdbath or, for small ground-feeding mammals, a pan or dish of water placed on the ground.

Native plants. Trees, flowers and shrubs that are native to Ontario grow better in our climate and soil conditions. They are also less susceptible to disease and pests than most imported species. Native plants will take less of your time and money to maintain. Our native wildlife are also better adapted to the native habitats in which they evolve.

Variety. Variety is important for a successful backyard habitat. Different species of animals need different kinds of food and shelter, and those needs change with the seasons. The greater the variety of plants and trees you have in your garden, the greater the variety of wildlife it will be able to sustain.

Patches and clumps. Clumps of plants give better protection for wildlife than single, neatly spaced plants. Grow shrubs and trees in natural-looking clumps, hedges and thickets, and leave open areas of lawn and flowers between the clumps.

Layering. The wildlife you attract can vary from small insects and birds to animals such as raccoons, foxes, rabbits and squirrels. Some insects, birds and animals live close to the ground, while others live in shrubs or trees. By creating layers of plants in your garden — including groundcover, flowers, shrubs, and small and large trees — you will give shelter to all types of animals.

Environmentally friendly. Chemical fertilizers and pesticides may give you a lusher, greener yard, but they may also kill the insects that pollinate flowers and help leaves and other material decay. Instead of chemicals, use compost, mulch, and hardier plant species. If necessary, weed by hand.

Compost is rotted manure, vegetable or plant material that is used to enrich the soil. Mulch is plant material such as straw, leaves, peat moss or tree bark that is spread on the ground to discourage weeds and retain water.



Where to Start

Creating your own nature preserve isn't something you can do in a weekend. Keep your project simple, especially in the beginning, and plan to take several years to create the garden you want. It takes time for plants and trees to mature and bear fruit.

You can make the project easier by breaking it up into smaller tasks. Don't try to remove all non-native plants at once. Replace them with native species gradually. Other tasks you can do a little at a time, include:

- relocating plants to form a clump;
- reducing the size of your lawn by reshaping your planting area;
- starting to mulch and compost; and
- even setting aside a corner of your yard to be completely untended.

You can also take simple steps to attract wildlife through the winter and spring.

In the fall, when you would usually clear out your garden, leave dead plants and leaves in some areas to give wintering wildlife cover and food. Insect pupae, spider eggs, seeds and old berries left over from the fall can be important sources of food for migrating birds in the spring.

To provide more cover for wildlife during the winter, avoid trimming the lower branches of shrubs and evergreens.

Planning Your Garden

There are three questions you need to answer when planning your new garden:

- 1) What is in my yard now?
- 2) What should be in my ideal wildlife garden?
- 3) How do I get from what I have now to what I want?

To answer the first question, you need to do a yard survey — that is, draw a plan of what is in your garden now.

You can then draw a preliminary plan to help you decide the answer to question 2, and to roughly outline where everything will go.

A planting plan, the last step in the planning process, will answer question 3 by listing what kinds of plants, and how many of each, you will put in your garden.

Each plant or tree provides a different benefit to animals. You have to choose the right combination of plants to make your garden welcoming throughout the year.



Step 1 - The Yard Survey

Make a drawing of your yard, preferably to scale on graph paper, and map in all of the following:

- Existing structures such as the house, garage and other outbuildings, the patio, fences, driveway and paths, as well as overhead power lines, underground cables, tile beds and septic tank fields.
- Existing plants, shrubs, trees and lawn.
- Views you want hidden, and windows from which you want to have a view.
- Areas to be used for special purposes, such as a play area, or a barbecue.
- Significant natural features on property nearby, such as large trees, waterways, parks or woodlots.
- The dimensions of the yard and a north arrow.

Figure 1 is a sample of what your yard survey might look like.

Step 2 - The Preliminary Plan

Now that you have a scale drawing of your present yard, you can create your ideal garden on paper.

You will have to make some decisions about what you want to use your yard for. Will you need a patio, a storage shed, an area for children to play, a vegetable garden? What is left over is space you have for a wildlife garden.

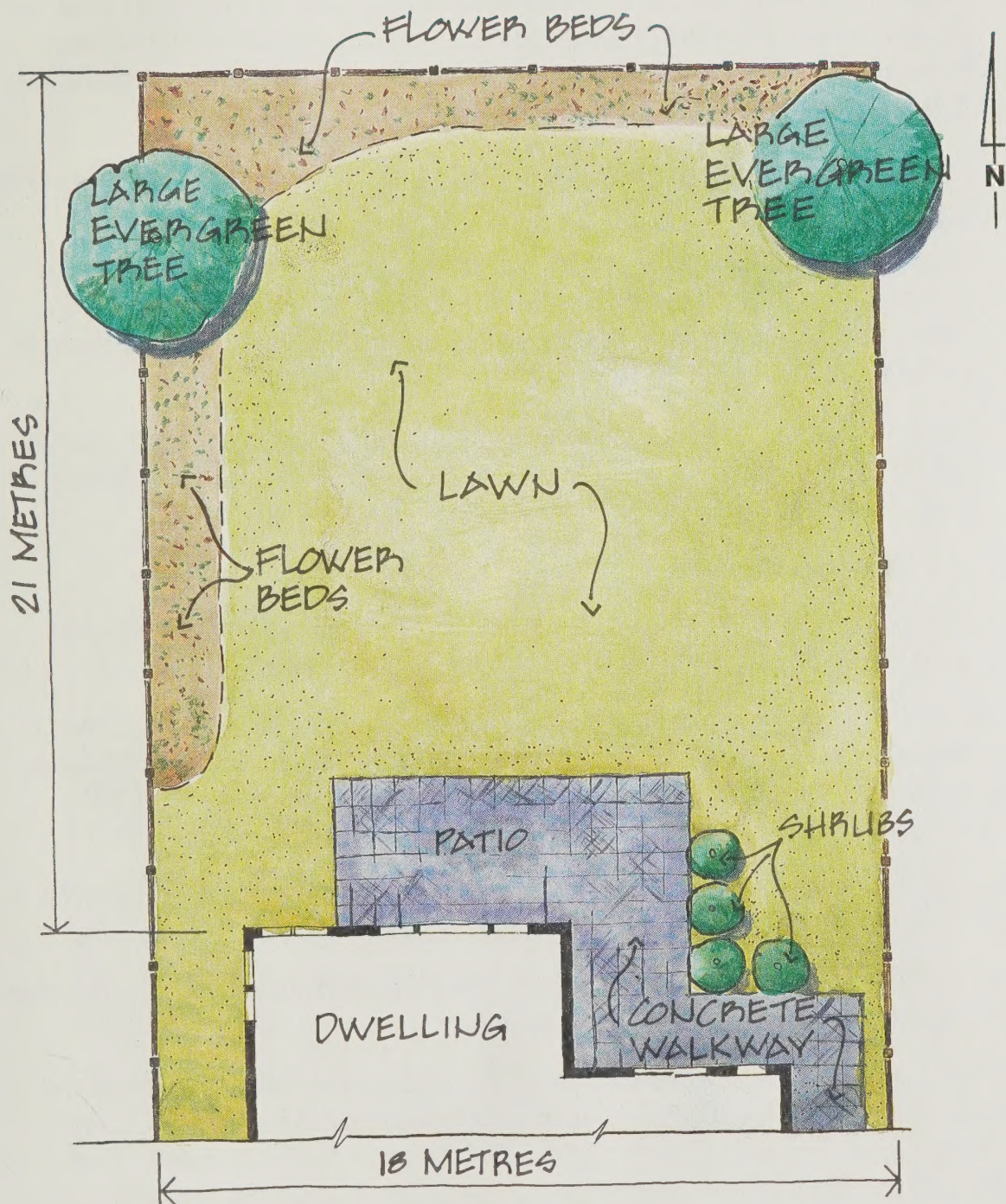
You may not need to make big changes in your yard. Your garden may already contain good habitat, and your plants may need only slight changes. Or you may find you only have a small corner free to landscape for wildlife. That's fine; every little bit counts.

Once you've made those decisions, you can transfer them to paper as you draw your preliminary plan, outlining areas for large and small trees, shrubs, hedges, flower beds and lawn. It will look something like our plan in Figure 2.

Here are some things to keep in mind as you draw up your plan:

- 1) Look again at the Landscaping for Wildlife principles. Plan clumps of plants and try to include as many layers of vegetation as possible.
- 2) This is also a good time to save yourself some money on air conditioning and heating bills. Plant deciduous trees (trees that lose their leaves in

Figure 1: Survey Of Existing Yard





winter) along the south side of the house for shade in summer. Plant evergreens on the northwest side of the property to cut the force of cold winter winds. These designs also provide better shelter for wildlife for the same reasons.

- 3) Think about how tall trees will be when full-grown. Large trees must be planted where they won't interfere with overhead power or telephone lines or with underground services. It may, in fact, be better to plant only medium-sized or even small trees, if your yard is not large.
- 4) Locate plant beds where salt and piles of heavy snow will not do damage.
- 5) Put your water source — a bird bath or small pool — near bushes or plants that provide escape cover, but with enough clearing around it so that predators can't approach without being seen. This also applies to where you place feeders. Baths and feeders will be used more if there is good cover nearby.
- 6) Flowers that will attract butterflies and hummingbirds will need a sunny spot in your garden. Butterflies will prefer a site that is also sheltered from the wind.

Step 3 - The Planting Plan

In Step 2 you laid out the general location for your plants. In this step, you choose the specific plants you will be putting in your garden.

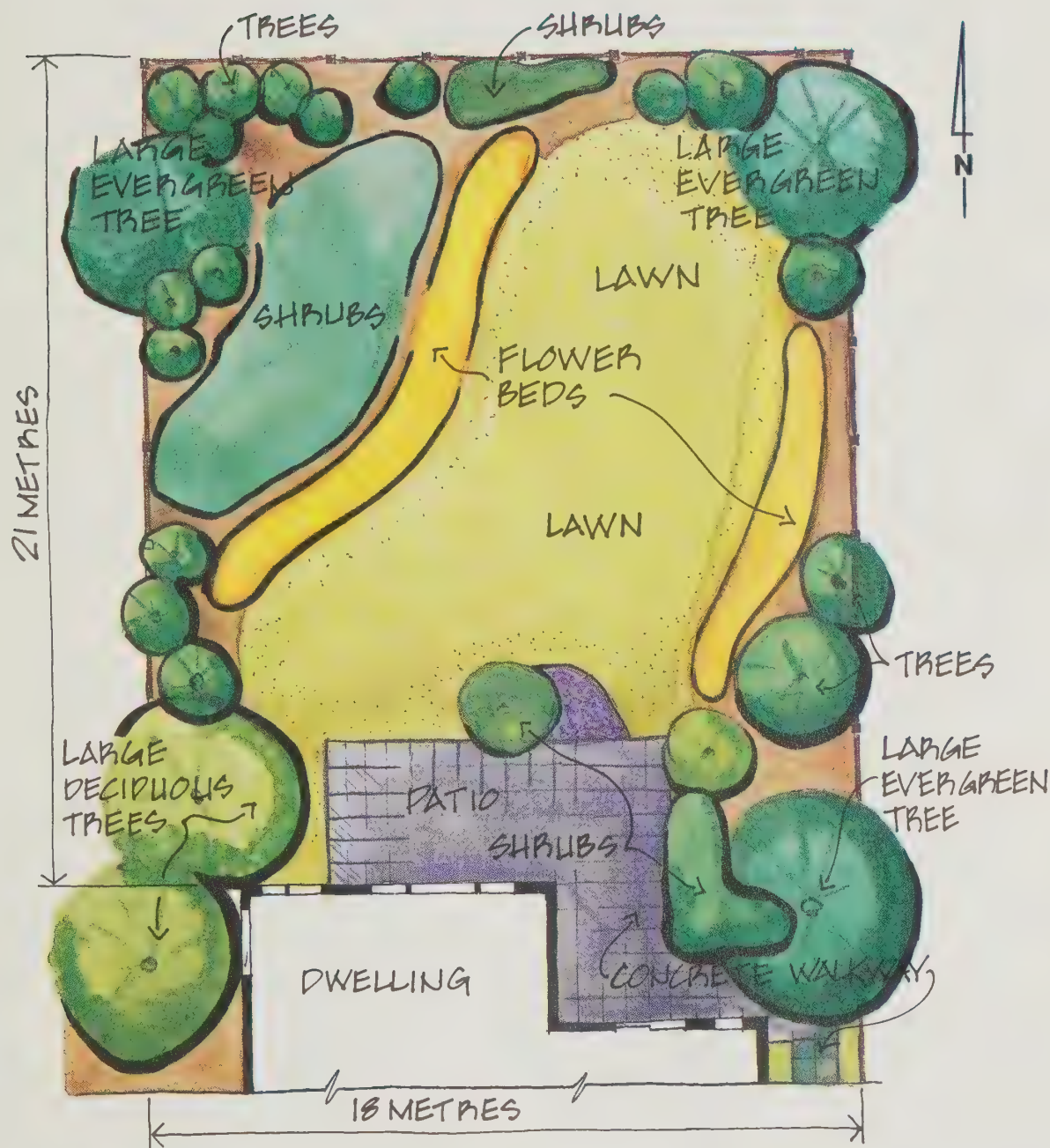
Knowing the growing conditions in your yard will help you when it comes to deciding what will grow best where. Is the soil sand, loam or clay? Squeeze some earth in your hand — loam clumps together loosely and is dark in colour; clay sticks together; sandy soil is loose and coarse-grained.

What are the drainage conditions? Well-drained soil holds little water, even after a heavy rainfall. Standing water suggests the soil doesn't drain well.

What sort of light does your yard get? Full sun, partial shade, full shade? Are there large slopes or contours to deal with?

You can get a kit to have your soil tested for acidity and fertility through the Ontario Ministry of Agriculture and Food's Consumer Information Centre, 801 Bay Street, Toronto, Ontario M7A 2B2, phone (416) 326-3400. The centre will supply you with the kit, which includes a container for your soil sample and a list of laboratories approved by the ministry. The laboratories charge a fee for soil tests.

Figure 2: Preliminary Plan





What to Plant

You now can begin to choose the plants you want and draw them into your planting plan, like the one we've shown in Figure 3.

If you are an experienced gardener, you can draw up your own list of plants by consulting our lists on the following pages. Just keep in mind that the combination you choose must provide food and shelter year round.

If you are not an experienced gardener, at this point you may want to get some input into your plans. You might also need information on how much space each plant will need. Your local nursery should be able to advise you. There are also books you can read (see Resource Guide), or you can consult a professional landscape architect.

The following lists suggest a few native species. You may be able to find other species that will do as well. We have included some imported substitutes in these lists in case native species are hard to get in your area or do not grow well in the city.

However, you can't just choose two or three species from each category. Some species have drawbacks, such as berries that are poisonous to children. We have included additional comments that will help you make your choice.

We have also included the Latin name of each plant. Sometimes the same common name is used for several different plants. By using the Latin name when you look for a species, you will be sure to get the plant you want.

The following short forms are used:

(I) Imported, not native to Ontario

(N) Native to Ontario

(D) Dioecious. Species that have separate male and female plants. Both must be planted together to ensure pollination and fruit production.

Food season: Sp - spring; Su - summer; F - fall; W - winter.

Large Trees

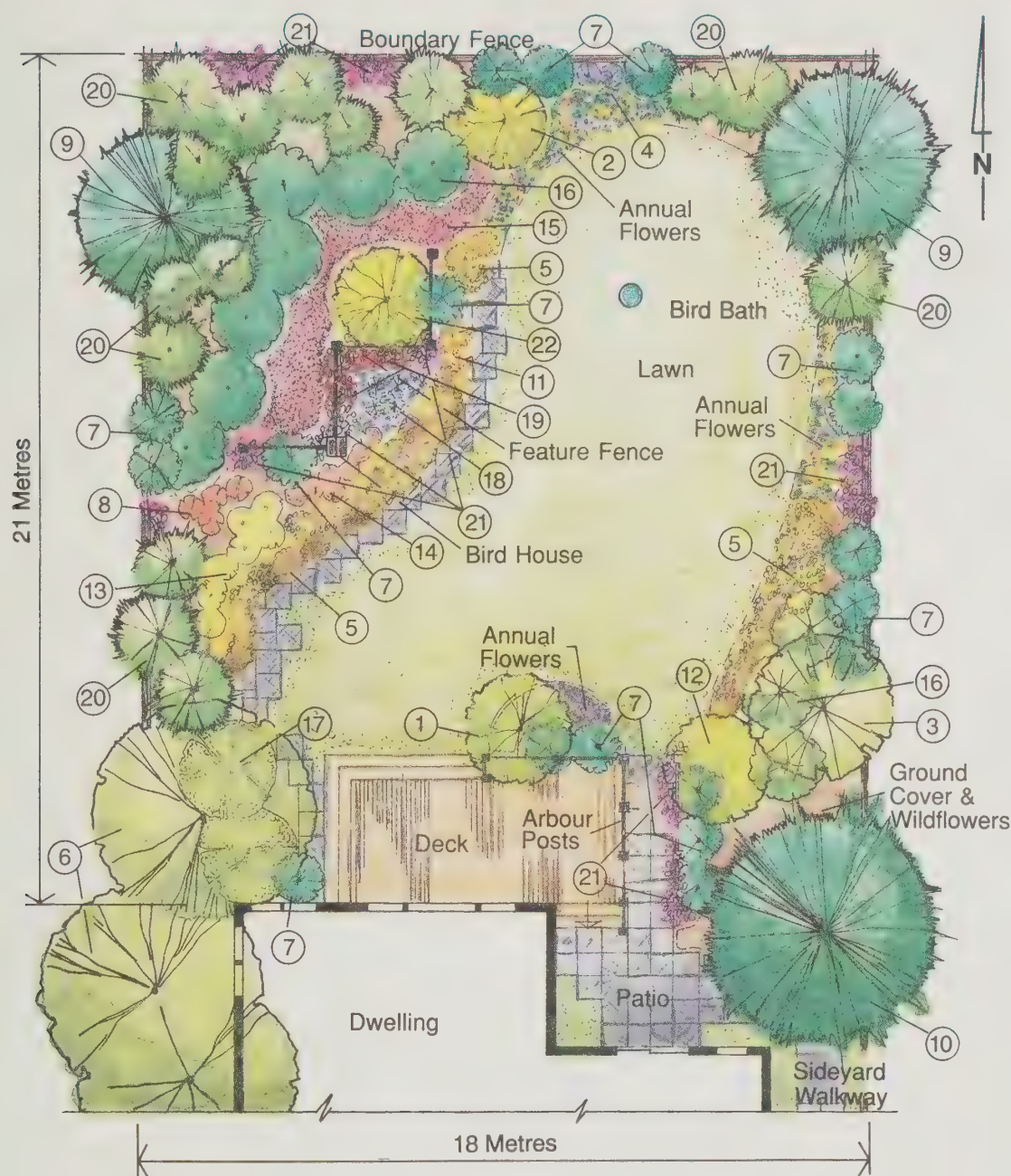
Large trees reach seven metres or more at maturity.

Whether you plant large or small trees, you will want to plant both evergreen and deciduous trees.

Evergreens give year-round cover and produce cones as food for small mammals and songbirds.

Deciduous trees as a group provide nuts, berries and seeds as food. Their leafy canopies also provide shade in summer and nesting sites. The area

Figure 3: Planting Plan





under them will be fine for spring flowers like trilliums, but may be too shady for sun-loving plants.

Evergreens:		
Food Season	Species	Latin Name
F,W	Eastern white pine (N)	<i>Pinus strobus</i>
F,W	White spruce (N)	<i>Picea glauca</i>
W	Eastern hemlock (N)	<i>Tsuga canadensis</i>
F	Red pine (N)	<i>Pinus resinosa</i>
F	White cedar (N)	<i>Thuja occidentalis</i>
F	Balsam fir (N)	<i>Abies balsamea</i>

Eastern white pine, eastern hemlock, white spruce and white birch (deciduous, listed below) won't grow well in the middle of cities or near major roadways, where pollution or air-borne salt is present. Some imported species that are more resistant and can be substituted are the Austrian pine (*Pinus negra*) for the white pine; Colorado blue spruce (*Picea pungens*) for the white spruce; and the Japanese larch (*Larix kaempferi*) for the hemlock.

Deciduous:			
Food Season	Species	Latin Name	Comments
F,W	Oaks	<i>Quercus</i> species	Good food source for many species including blue jays, squirrels, chipmunks, woodpeckers.
Su,F,W	Maples	<i>Acer</i> species	Fast growing but can crowd out other species on small lot. Favoured by evening grosbeaks.
F,W	White birch (N)	<i>Betula papyrifera</i>	Cone-like seeds attract small finches.
F,W	White ash (N)	<i>Fraxinus americana</i>	Good berry supply
F	Butternut (N)	<i>Juglans cinerea</i>	
F	Shagbark hickory (N)	<i>Carya ovata</i>	
Su,F	Black cherry (N)	<i>Prunus serotina</i>	
F	Horse chestnut (I)	<i>Aesculus hippocastanum</i>	
F,W	Hackberry (N)	<i>Celtis occidentalis</i>	Favoured by songbirds
Su	Shadbush (N)	<i>Amelanchier arborea</i>	



Black walnut is not recommended for small yards because the nuts make it hard to mow, and the trees produce chemicals that kill or injure many plants.

Small Trees

Small trees grow to a height of two to seven metres.

Many small fruit trees are a good food source for both songbirds and small mammals.

Food Season	Species	Latin Name	Comments
Evergreens:			
F,W	Eastern red cedar (N)	<i>Juniperus virginiana</i>	One of best for cover and nesting sites for songbirds. Favored by cedar waxwings. Host for red cedar-apple rust. Don't plant near apple or hawthorn.
Deciduous:			
F,W	Amer. mountain ash (N)	<i>Sorbus americana</i>	Good winter food source.
F,W	Europ. mountain ash (I)	<i>Sorbus aucuparia</i>	Good winter food source.
F,W	Crabapples	<i>Malus species</i>	Thorns protect during nesting.
F,W	Hawthorn	<i>Crataegus species</i>	
Su	Red mulberry (N & D)	<i>Morus rubra</i>	Food for more than 100 bird species but berries stain sidewalk/patio.
Su	Serviceberries	<i>Amelanchier species</i>	Favored by many species. Excellent choice for wildlife garden.
Su,F	Pin cherry (N)	<i>Prunus pensylvanica</i>	Good small-yard substitute for black cherry.
F	Chokecherry (N)	<i>Prunus virginiana</i>	Good winter food source.
F,W	Staghorn sumac (N)	<i>Rhus typhina</i>	
F,W	Nannyberry (N)	<i>Viburnum lentago</i>	

Eastern red cedar (actually a juniper) is considered to be a small tree, but under some conditions it can grow quite large. Consult your local nursery.



Shrubs

Shrubs grow one to three metres in height at maturity.

In some ways, shrubs are more important than trees in the wildlife garden. They provide denser cover, reach maturity in a shorter time, provide a wide variety of food and are better for animals that live near the ground.

Food Season	Species	Latin Name	Comments
Evergreens:			
W	American yew (N,D)	<i>Taxus canadensis</i>	Grows well in shade. Songbirds eat the fruit but its seeds are poisonous to children.
F,W	Common juniper (N,D)	<i>Juniperus communis</i>	Good cover for ground feeders and fares well in poor growing conditions.
Deciduous:			
Su,F	Butterfly bush (I)	<i>Buddleia davidaii</i>	Good choice.
Su,F	Dogwoods	<i>Cornus</i> species	
F,W	Winterberry holly (N)	<i>Ilex verticillata</i>	
F	Southern arrowwood (N)	<i>Viburnum dentatum</i>	Good for hedges and clump plantings.
Su,F,W	Roses	<i>Rosa</i> species	
Su	Raspberry & Blackberries	<i>Rubus</i> species	
F	American elder (N)	<i>Sambucus canadensis</i>	
F	American hazel (N)	<i>Corylus americana</i>	
F	Beaked hazel (N)	<i>Corylus cornuta</i>	

Several shrubs are attractive sources of nectar for butterflies and hummingbirds, such as butterfly bush, lilac and tatarian honeysuckle. Remember to avoid white-flowering varieties, because butterflies and hummingbirds prefer bright colours.

American yew, common juniper and winterberry holly have male and female flowers on separate plants. You will have to plant at least two of these shrubs if you want seeds.



Vines and Groundcovers

Vines and groundcovers can be very suitable for wildlife as both food and shelter.

Food Season	Species	Latin Name	Comments
Vines:			
F,W	Bittersweet (N,D)	<i>Celastrus scandens</i>	Berries are poisonous to humans.
F,W	Virginia creeper (I)	<i>Parthenocissus quinque</i>	Bright scarlet leaves folia beautiful in fall garden.
F	Wild grape (N)	<i>Vitis riparia</i>	Good cover for small birds. Songbirds like fruit. Bark used to make nests.
Su,F	Trumpet creeper (N)	<i>Campsis radicans</i>	Favoured by hummingbirds.
Ground covers:			
F,W	Bearberry (N)	<i>Arctostaphylos uva-ursi</i>	
Su,F	Bunchberry (N)	<i>Cornus canadensis</i>	
F,W	Partridgeberry (N)	<i>Mitchella repens</i>	

The groundcovers mentioned above all like acid soil and would grow well if planted in the shelter of cone-bearing trees.

Flowers

Masses of flowers will attract hummingbirds and butterflies better than single plants or small clumps.

However, some popular flower varieties have been developed for showiness at the expense of nectar production and fragrance. Some varieties of plants are sterile hybrids that will not yield the seeds that are food for songbirds and small mammals. When buying plants, ask about these varieties and avoid putting them in your garden.

Hummingbirds favour bright red and orange flowers while butterflies prefer purple, blue, yellow and pink flowers.

Flowers for hummingbirds:

- Coral bells - *Heuchera sanguinea*
- Hollyhock - *Althea rosea*
- Scarlet sage - *Salvia splendens*



Spotted jewelweed - *Impatiens biflora*

Wild bergamot - *Monarda fistulosa*

Scarlet bee balm or oswego tea - *Monarda didyma*

Flowers for seed-eating birds:

Evening primrose - *Oenothera biennis*

Zinnia

Coreopsis - *Coreopsis* species

Beggar ticks - *Bidens* species

Asters

Hollyhock

Cereal crops such as wheat and corn

Cosmos

Ageratum

Bachelor's button

Flowers for butterflies:

Asters, goldenrods, thistles, dogbane, zinnias, lupines, coreopsis

Bergamots - *Monarda* species

Black-eyed susans - *Rudbeckia hirta*

Blazing stars - *Liatris* species

Coneflowers - *Echinacea* species

Coreopsis - *Coreopsis* species

Daisies - *Chrysanthemum* species

Phlox - *Phlox* species

Verbena - *Verbena* species

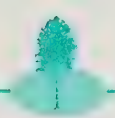
Mints - *Mentha* species

Yarrow - *Achillea millefolium*

Onions - *Allium* species

Milkweeds (*Asclepias* species) are also excellent, but in some areas are classified as noxious weeds. Ask your local weed inspector.

Black swallowtail butterflies will be attracted by dill, parsley, carrot or Queen Anne's lace.



Where to Get Your Plants

Once you have a list of the plants you want to put in your garden, and have double-checked your choices, you're ready to get the plants themselves.

Avoid scavenging plants in the wild. Transplanting wild plants requires time and knowledge that only the most experienced gardeners have. It also threatens existing species and may not provide you with healthy plants.

Nurseries are your best source of native plants, shrubs and trees. More of them now are stocking native species. A helpful nursery will be able to provide you with healthy plants that have been propagated from seeds, an important step in conserving and nurturing our natural heritage, because it adds to our stock rather than moving around what already exists.

You can buy wildflower seed mixes, but they may contain imported weed species. Check the contents of the package and avoid any that contain imported weeds such as purple loosestrife (*Lythrum salicaria*) and other *Lythrum* species. Loosestrife now is invading and destroying many of our native wetlands.

The Canadian Wildflower Society, listed in the Resource Guide, holds an annual seed sale of native plants and is an excellent source of information.

Water Supply

This is one of the three basic elements that cannot be supplied by plants or trees. If you have a large yard and the resources, you could put in a pool (see the Resource Guide for more information). Less ambitious gardeners can make do with a bird bath.

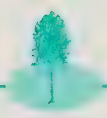
The bath should have gradually sloping sides to enable birds to stand in it. Place it fairly close to a shrub or tree, but not so close that predators can approach undetected. It should be kept relatively free of dead leaves and other organic material.

Enjoy Your Garden

Remember that you don't have to create your wildlife garden in one season. Leave yourself time and space to make mistakes and change your mind. And don't lose sight of the fact that your garden is a place to be enjoyed.

Try keeping a journal in which you record the species you plant, their growth each year, and any new species that appear. Keep track of the wildlife your garden attracts and how it changes with the seasons and the years.

Take photos of your garden from the same spot each season or each year so you can track its growth.



Show off your garden to friends and neighbours. You may be able to talk them into taking on a similar project and you can share the information you've picked up.

Creating habitats that are friendly to native plants and wildlife is exciting and rewarding. Once your project is well under way, you will discover new benefits every day, as you welcome new varieties of birds, butterflies, insects, and mammals to your backyard.

Don't wait to begin. Start planning today!

Resource Guide

Plant Sources

Many nurseries carry a wide selection of native plants. The two listed below will start you on your search for more:

Backyard Naturalists
159 Main Street
Unionville, ON L3R 2G8
416-513-9214

Also has books for sale on the subject.

Hortico
723 Robson Road
Waterdown, ON L0R 2H1
416-689-6984

Clubs and Associations

Canadian Wildflower Society
c/o John Crow
4981 Highway 7 East
Unit 12A, Suite 228
Markham, ON L3R 1N1
416-294-9075

Publishes *Wildflower*, a quarterly magazine with an index each January of the previous year's articles. Each issue also carries a list of resources available in North America, and information about their annual seed sales.

Toronto Field Naturalists
20 College Street, Unit 11
Toronto, ON M5G 1K2
416-968-6255

Publishes materials on native plants and animals found in Toronto ravines and parks and other natural areas of Ontario. Holds monthly meetings and



publishes a newsletter eight times a year that lists the 150 walks and other outings it organizes annually.

Federation of Ontario Naturalists
355 Lesmill Road
Don Mills, ON M3B 2W8
416-444-8419

Publishes *Seasons*, a quarterly magazine on issues relating to conserving natural habitats.

National Wildlife Federation's Backyard Wildlife Habitat Program
1400 16th Street, N.W.
Washington, D.C. 20036
202-797-6800

Provides an information package which includes a booklet on backyard habitats and a paperback, *Backyard Naturalist*, about one person's efforts to attract wildlife to his yard.

Other Helpful Publications

A Guide to Natural Woodland and Prairie Gardening by L. Dorney, J. Rich & R. Dorney. 1978. Natural Woodland Nursery Ltd. \$5. Available from Ecoplans Ltd., 105 Lexington Road, Unit #5, Waterloo, ON N2J 4R8. This guide offers more detailed information on how to recreate woodlands and short and tall grass prairie.

The Wildlife Gardener by J.V. Dennis. 1985. Alfred A. Knopf, New York.

Pool Resources by Millis Lees. Harrowsmith, June 1993, pp. 57-61. Account by author of family's project to construct backyard water garden.

How to Get Your Lawn and Garden Off Drugs by Carole Rubin. 1989. Friends of the Earth, Ottawa, Canada.

Natural Gardens To Visit

Ecology Park, 12 Madison Avenue, Toronto, ON M5R 2S1. Project of Pollution Probe Foundation.

Gosling Wildlife Garden, J.C. Taylor Nature Centre, The Arboretum, University of Guelph, Guelph, ON N1G 2W1. Tel 519-824-4120.

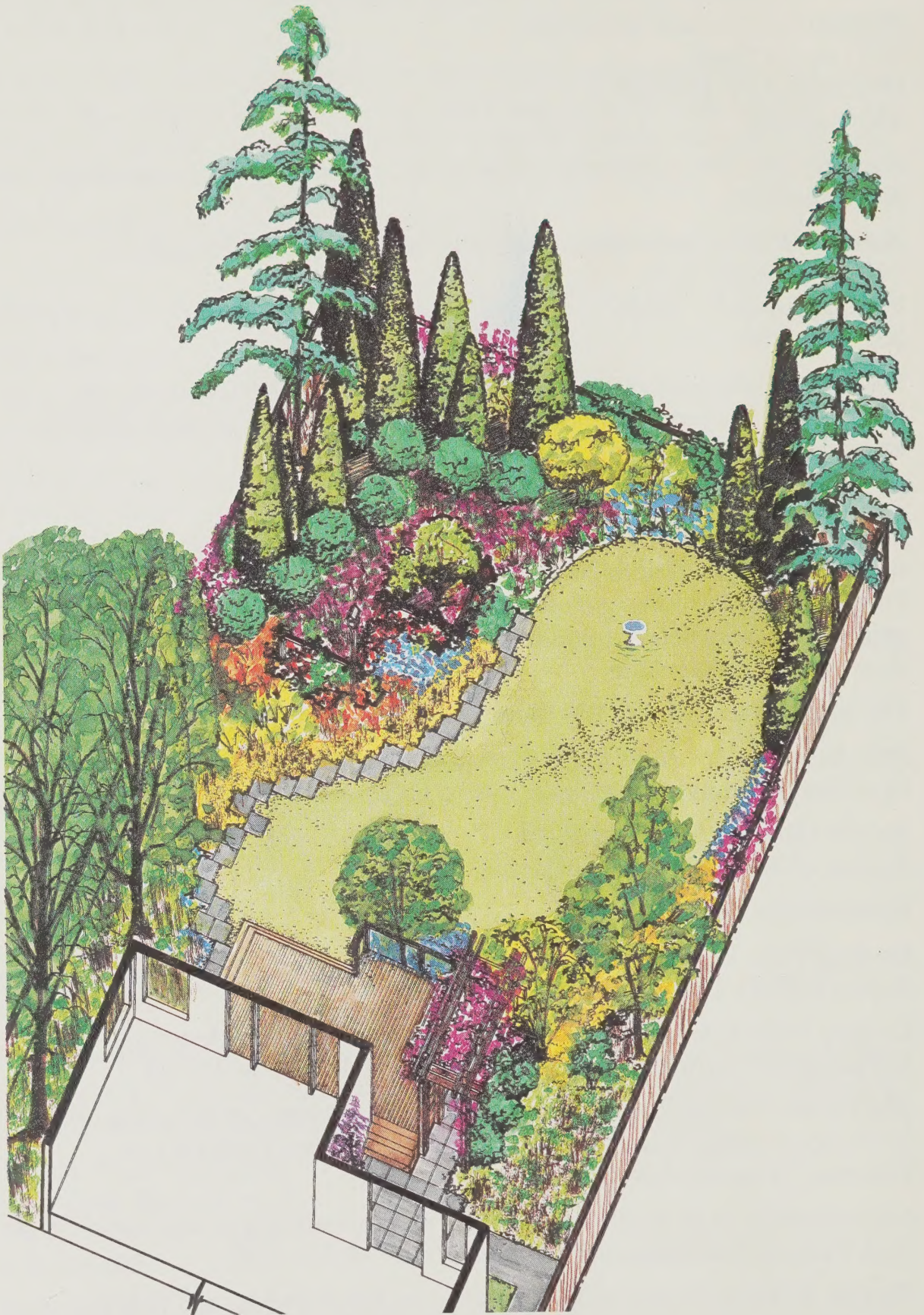
The Robert Starbird Dorney Ecology Garden, University of Waterloo. For information contact Faculty of Environmental Studies, University of Waterloo, Waterloo, ON N2L 3G1.

Naturalized parks in North York. For more information, contact City of North York Parks and Recreation Department. Tel. 416-224-6292.

George W. North Memorial Wildlife Garden, Royal Botanical Gardens, Nature Interpretive Centre, Box 399, Hamilton, ON L8N 3H8.



Our Sample Yard in 10 To 15 Years



3 1761 11547703 6



50343
(50 k P.R., 93 08 01)
ISBN 0-7778-1519-2



Printed on
recycled paper